

IN THE CLAIMS:

1. (Currently Amended) A An audio signal controller for inputting and outputting a two-channel audio signal, controller having a surround circuit, characterized by comprising:

a surround effect circuit capable of for switching on and off and outputting a surround effect of an inputted two-channel audio signal;

B
band-pass circuits each defining interposed into a corresponding channel to switch for switching a midrange of an audio signal frequency band having such a two-channel audio signal, between a band-pass on state having a frequency characteristic for providing an output at a higher gain than a bass range and a treble range and a band-pass off state having a flat frequency characteristic between the bass range and the treble range, the midrange of each audio signal frequency band containing speech; between a band-pass on state where it provides such an output that a midrange of an audio signal frequency band has a higher gain than a bass and a treble ranges and a band-pass off state where a frequency characteristic is flat between the bass range and the treble range; and

a controlling section for simultaneously causing said surround effect circuit to switch on and off the surround effect and said band-pass circuits to switch on and off the band pass, ~~wherein interlockingly switching on and off said surround circuit and said band-pass circuits.~~

when said controlling section switches on the surround effect circuit, the surround effect is produced on the outputted audio signal and the midrange of the audio signal frequency band containing speech is outputted at a high gain.

B
Cont
2. (Currently Amended) A An audio signal controller for inputting and outputting a two-channel audio signal, controller having a surround circuit, characterized by comprising:

a surround effect circuit capable of for switching on and off and outputting a surround effect of an inputted two-channel audio signal;

band-pass circuits each defining interposed into a corresponding channel to switch for switching a midrange of an audio signal frequency band having such a two-channel audio signal, between a band-pass on state having a frequency characteristic for providing an output at a higher gain than a bass range and a treble range and a band-pass off state having

a flat frequency characteristic between the bass range and the treble range, the midrange of the audio signal frequency band containing speech; ~~between a band-pass on state where it provides such an output that a midrange of an audio signal frequency band has a lower gain than a bass and a treble ranges and a band-pass off state where a frequency characteristic is flat between the bass range and the treble range;~~

B
Cont
a plurality of speakers each connected to an output of a corresponding one of said channels for executing electric-acoustic conversions and executing more efficient electric-acoustic conversions for a midrange than for the bass and treble ranges; and

a controlling section for simultaneously causing said surround effect circuit to switch on and off the surround effect and said band-pass circuits to switch on and off the band pass, and controlling, the band-pass on state in which the band pass circuits provide outputs at a low gain to have a flat resultant frequency characteristic and the band-pass off state to provide the speaker with an output characteristic for highly efficiently executing the conversion in the midrange of the audio signal frequency band, thereby producing a surround

~~effect interlockingly switching on and off said surround circuit and said band-pass circuits.~~

3. (Currently Amended) The audio signal controller according to Claim 1, wherein ~~characterized in that~~ the midrange of the audio signal frequency band is ~~set at~~ a band between 400 Hz and 7 kHz.

8
Cont
4. (Currently Amended) ~~A reproducing device having the audio signal controller set forth in Claim 1 to reproduce~~ The audio signal controller according to Claim 1, comprising in combination therewith a reproducing device for reproducing audio data from a recording medium having audio data and video data recorded thereon with video data, characterized in that: wherein

the said reproducing device comprises has means for reproducing audio data read from a ~~the~~ recording medium, and

said controlling section ~~interlockingly switches~~ is for simultaneously switching on and off said surround effect circuit and said band-pass circuits based on the audio data read from the a recording medium by the reproduction means for reproducing audio data.

5. (Currently Amended) The audio signal reproducing controller device according to Claim 4, wherein characterized in that said controlling section interlockingly switches is for simultaneously switching on said surround effect circuit and said band-pass circuits if said when read audio data are determined to be sound-compressed multichannel data.

6. (Currently Amended) The audio signal controller reproducing device according to Claim 5, wherein characterized in that the multichannel audio data are delby-Dolby digital (AC-3) or dts audio data.

7. (Currently Amended) A reproducing device capable of for reproducing as a recording medium, a DVD disc having at least video data and multichannel audio data recorded thereon, comprising:

disc determining means for determining whether a disc used as a recording medium is a DVD disc or another type of disc;

a decoder for extracting multichannel audio data from the recording medium and downmixing, before outputting, the extracted data into two channels regardless of the number of channels in the original data;

determining means for determining the a type of the extracted multichannel audio data;

a surround effect circuit ~~capable of~~ for switching on and off a surround effect of an inputted two channel audio data;

B
cont
band-pass circuits each ~~interposed~~ defining ~~into~~ a corresponding channel ~~to switch~~ for switching a midrange of an audio signal frequency band having the two-channel audio signal, between a band-pass on state having a frequency characteristic for providing an output at a higher gain than a bass range and a treble range and a band-pass off state having a flat frequency characteristic between the bass range and the treble range, the midrange of the audio signal frequency band containing speech; ~~between a band-pass on state where it provides such an output that a midrange of an audio signal frequency band has a higher gain than a bass and a treble ranges and a band-pass off state where a frequency characteristic is flat between the bass range and the treble range;~~ and

a controlling section for simultaneously causing said surround effect circuit to switch on and off the surround effect and said band-pass circuits to switch on and off the band pass, wherein~~interlockingly switching on and off said surround circuit and said band-pass circuits,~~

B
Cont
~~characterized in that~~ said controlling section is for
simultaneously switching interlockingly switches on said
surround effect circuit and said band-pass circuits ~~if it~~ when
said controlling section determines the audio data to be
multichannel audio data, thereby producing a surround effect
on the outputted audio signal and outputting at a high gain a
midrange of the audio signal frequency band containing speech.

8. (New) The audio signal controller of claim 2, wherein
each speaker has an output characteristic for highly
efficiently executing the conversion in the midrange.
